

WHAT IS CLAIMED IS:

1. An octothorp-shaped chassis frame formed by joining an end portion of a joining member in abutting contact with an outer face of a joined member, wherein the joining member is formed of a hollow pipe, the end portion of the joining member is gradually expanded to form a joint expanded in a flared skirt shape, and an outer edge of the joint is brought into contact with and welded to the outer face of the joined member to join the joining member to the outer face of the joined member.

2. The chassis frame according to claim 1, wherein the joining member is a side member and the joined member is an end cross member.

3. The chassis frame according to claim 1, wherein the joining member is a cross member and the joined member is a side member.

4. The chassis frame according to claim 1, wherein both the joining member and joined member are formed of pipes having circular sectional shapes and the outer edge of the joint is substantially in a circular arc shape following a pattern of the outer face of the joined member in a side view.

5. The chassis frame according to claim 1, wherein the joining member is a pipe having a circular sectional shape, the joined member is a pipe having a rectangular sectional shape, and the outer edge of the joint is substantially in a linear shape following a pattern of the outer face of the joined member in a side view.

6. The chassis frame according to claim 1, wherein the outer edge of the joint is in a shape following a pattern of the outer face of the joined member in a side view and is in an elliptic shape having a diameter in an extending direction of the joined member greater than that of a diameter in an orthogonal direction to the extending direction of the joined member in a front view.

7. The chassis frame according to claim 1, wherein the outer edge of the joint is in a shape following a pattern of the outer face of the joined member in a side view, and is in a cross shape respectively extending in an extending direction of the joined member and in an orthogonal direction to the extending direction of the joined member in a front view.

8. The chassis frame according to claim 1, wherein the joint is symmetric respectively in an extending direction of the joined member and in an orthogonal direction to the

extending direction of the joined member with respect to an axial direction of the joining member.

9. The chassis frame according to claim 1, wherein the joining member is joined in abutting contact with the outer face of the joined member to be orthogonal with respect to the outer face thereof in a plan view and a side view.

10. The chassis frame according to claim 1, wherein the joining member is joined in abutting contact with the outer face of the joined member to be oblique with respect to the outer face thereof in a plan view.

11. The chassis frame according to claim 1, wherein the joining member is joined in abutting contact with the outer face of the joined member to be oblique with respect to the outer face thereof in a side view.

12. The chassis frame according to claim 1, wherein each joint is provided with a swelling rib forming a groove recessed from the outer face of the joined member.

13. A method of manufacturing an octothorp-shaped chassis frame formed by joining an end portion of a joining member formed of a hollow pipe in abutting contact with an outer

face of a joined member, wherein

the joining member joins to the outer face of the joined member by welding an outer edge of a flared-skirt-shaped joint formed at the end portion of the joining member by bringing into contact with the outer face of the joined member;

the flared-skirt-shaped joint formed at the end portion of the joining member is formed, using a forming punch comprising a base portion having a surface following a pattern of the outer face of the joined member, and a flared-skirt-shaped protruding portion protruding from the base portion in a protruding direction aligned with a direction in which the joining member joins to the joined member, by pushing the flared-skirt-shaped protruding portion of the forming punch into the end portion of the position-fixed joining member by aligning the protruding direction of the flared-skirt-shaped protruding portion with an axial direction of the joining member, to expand the end portion of the joining member by the flared-skirt-shaped protruding portion.

14. The method of manufacturing a chassis frame according to claim 13, wherein the forming punch includes a protruding portion substantially in a truncated cone shape formed of an upper end face in a shape identical to an inside shape of the joining member, a lower end face having an outer edge in a side view having a shape following a pattern of the

surface of the base portion which follows the outer face of the joined member and the outer edge in a front view in an elliptic shape having a major axis in an extending direction of the joined member and a minor axis in the orthogonal direction to the extending direction of the joined member, and a curved face connecting the upper end face and the lower end face.

15. The method of manufacturing a chassis frame according to claim 13, wherein the forming punch includes a protruding portion substantially in a truncated cone shape formed of an upper end face in a shape identical to an inside shape of the joining member, a lower end face having an outer edge in a side view having a shape following a pattern of the surface of the base portion which follows the outer face of the joined member and the outer edge in a front view having a cross shape extending respectively in an extending direction and in an orthogonal direction to the extending direction of the joined member, and a curved face connecting the upper end face and the lower end face.